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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/723,893	11/26/2003	Charles Cameron Brackett	133162IT/YOD GEMS:0233	1135
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GE HEALTHCARE c/o FLETCHER YODER, PC P.O. BOX 692289 HOUSTON, TX 77269-2289			WOZNIAK, JAMES S	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/723,893

Applicant(s)

BRACKETT ET AL.

Examiner

James S. Wozniak

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6, 8-14, 16-21, 23-26 and 29-37 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8-14, 16-21, 23-26 and 29-37 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02 November 2007 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- ☐ Notice of Informal Patent Application
- ☐ Other: _____

DETAILED ACTION

Response to Amendment

1. In response to the office action from 5/17/2007, the applicant has submitted an amendment, filed 11/2/2007, amending independent claims 1, 8, 16, 23, 30, 33, and 36-37, while arguing to traverse the art rejection based on the limitation regarding available speech command display in PACS systems and radiological dictation stations (*Amendment, Pages 25-26*).

Applicant's arguments have been fully considered, however the previous rejection is maintained, altered with respect to the amended claims and due to the reasons listed below in the response to arguments.

2. The amendment to the specification would overcome the previous objection (*i.e., updating "voice recognition" to the proper art term --speech recognition--*), however, this amendment raises the issue of new matter (*see below objection*).

3. In response to amended Fig. 6, the examiner has withdrawn the previous objection to the drawings.

4. In response to the amended claims, the examiner has withdrawn the previous corresponding claim objections.

5. In response to amended claims 1, 8, 23, 33, and 36, the examiner has withdrawn the previous 35 U.S.C. 112, second paragraph rejection.

6. In response to amended claims 36-37, the examiner has withdrawn the previous 35 U.S.C. 101 rejection.

Response to Arguments

7. Applicant's arguments have been fully considered but they are not persuasive for the following reasons:

With respect to the independent claims, the applicant argues that Brant et al (*U.S. Patent: 6,278,975*) fails to teach speech recognition control of either a picture archival communication system or a medical dictation station for annotating radiological images because Brant is devoid of such features. It is also argued that Greenberg (*U.S. Patent: 6,514,201*) fails to teach such features because Greenberg teaches an "ultrasound review station" (*Amendment, Page 26*).

In response, the examiner notes that Brant is relied upon to provide the teaching of providing available speech commands to a user through a pop-up menu at various medical system contexts (*see, for example, Prior OA, Page 7*). Although Brant suggests being able to control medical imaging systems (*Col. 10, Lines 42-46*), it was noted that Brant does not specifically refer to those imaging-based systems in the presently claimed invention (*i.e., PACS, and also, the newly claimed radiological annotation systems*) (*See Prior OA, Pages 12-13*). Instead, it is the Greenberg reference that provides these teachings. In response to these

arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

As noted above, the applicant argues that Greenberg fails to teach speech control of a PACS or radiological annotation system because Greenberg only teaches an "ultrasound review station". In response, the examiner notes that the system taught by Greenberg is both a PACS and radiological annotation system. The system taught by Greenberg allows medical ultrasound images (*i.e., pictures*) and reports to be stored (*i.e., archived*) for access on/between multiple image review stations via a network (*i.e., communication*) (*Col. 4, Lines 61-66; Col. 5, Line 35- Col. 6, Line 65; and Col. 8, Lines 23-67*). Thus, since the system taught by Greenberg provides speech control (*Col. 5, Line 35- Col. 6, Line 65*) of a system that allows a user to access stored medical images over a network, Greenberg discloses the claimed "PACS" system.

The system taught by Greenberg further allows a user to dictate a spoken report pertaining to an ultrasound image for transcription (*Col. 6, Lines 1-65; and Col. 8, Lines 48-67*). Ultrasounds are a type of diagnostic medical imaging known as radiology. Thus, since Greenberg teaches a system enables a user to dictate a spoken report pertaining to an ultrasound image, Greenberg discloses the claimed "radiological dictation station".

It is further noted that independent claim 33 does not include either of the applicant's above noted features, thus, these arguments are moot with respect to this claim and the previous rejection is repeated below. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies

(i.e., system use in PACS or radiological annotation systems) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

The art rejections of the dependent claims are traversed for reasons similar to the independent claims (*Amendment, Page 26*). In regards to such arguments, see the response directed towards the independent claims.

Specification

8. The amendment filed 11/2/2007 is objected to under 35 U.S.C. 132(a) because it introduces new matter into the disclosure. 35 U.S.C. 132(a) states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows:

On page 3 of the amendment pertaining to the Background Section, speech recognition, which is recited throughout the specification, is redefined as involving speech *and* voice recognition ("*with voice and speech recognition software*"). The original specification makes no mention of recognizing the speaker of a voice command. Rather, the specification as filed only discloses recognizing the command word. Thus, the redefining of speech recognition as voice and speech recognition is directed to new matter.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 102

9. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10. **Claims 33-35** are rejected under 35 U.S.C. 102(b) as being anticipated by Brant et al (*U.S. Patent: 6,278,975*).

With respect to **Claim 33**, Brant discloses:

Means for receiving, recognizing, and applying voice commands uttered by a user to control a medical system (*speech recognition processor, Col. 6, Line 58- Col. 7, Line 15*);

Means for graphically displaying acceptable voice commands at an interface of the medical system (*computer display, Col. 6, Line 58- Col. 7, Line 53; and Figs. 6-8*); and

Means for indicating recognition and receipt of one or more voice commands uttered by the user which correspond to one or more of the acceptable voice commands (*speaker/monitor for recognition feedback, Col. 4, Lines 62-65; and Col. 7, Line 54- Col. 8, Line 2*).

With respect to **Claim 34**, Brant further discloses:

The voice recognition control system is configured for "command and control" (*Col. 4, Lines 15-33*) and the available voice commands are automatically displayed (*automatic computer-generated pop-up menus of available voice commands, Col. 7, Lines 16-53; and Figs. 6-8*).

The particular point is a present point in the control scheme (*voice commands that are valid for a particular medical system context, Col. 6, Line 43- Col. 7, Line 53; and Col. 10, Line 56- Col. 11, Line 6*).

With respect to **Claim 35**, Brant discloses:

Means for the user to acknowledge indication that the control system has recognized and received the uttered voice command before the control system applies the uttered voice command to control the medical system (*confirmation means, Col. 7, Line 54- Col. 8, Line 21*).

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. **Claims 1-6, 8-14, 16-21, 23-26, 29-32, and 36-37** are rejected under 35 U.S.C. 103(a) as being unpatentable over Brant et al (*U.S. Patent: 6,278,975*) in view of Greenberg (*U.S. Patent: 6,514,201*).

With respect to **Claim 1**, Brant discloses:

Determining available voice commands within a medical system control scheme (*determining available voice commands for a particular medical system context, Col. 6, Line 43- Col. 7, Line 53; and Col. 10, Line 56- Col. 11, Line 6*);

Graphically displaying the available voice commands (*pop-up menu on a display that lists available voice commands, Col. 6, Line 58- Col. 7, Line 53; and Figs. 6-8*);

Receiving and recognizing one or more voice commands corresponding to one or more of the available voice commands (*receiving a spoken command via a microphone input and performing speech recognition, Col. 4, Lines 15-33; and Col. 6, Line 63- Col. 7, Line 15*); and

Implementing the one or more voice commands to control the medical system (*voice command and control of a medical system in response to recognized commands, Col. 4, Lines 15-33; and Col. 6, Line 57- Col. 7, Line 15*).

Although Brant discloses the benefit of controlling medical imaging systems (*Col. 10, Lines 42-46*), Brant does not explicitly disclose the types of medical imaging systems capable of being controlled, specifically a picture archival communication system or PACS. Greenberg, however, recites a speech-controlled system for storing medical ultrasound images and reports for access on/between multiple image review stations via a network (*Col. 4, Lines 61-66; Col. 5, Line 35- Col. 6, Line 65; and Col. 8, Lines 23-67*).

Brant and Greenberg are analogous art because they are from a similar field of endeavor in speech-controlled medical systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Brant with the concept of using speech commands to control an ultrasound imaging system as taught by Greenberg in order to provide a more efficient and user-friendly interface to an ultrasound imaging system (*Greenberg, Col. 2, Lines 28-43*).

With respect to **Claim 2**, Brant further discloses:

The available voice commands are recognizable by a speech recognition control system at a current point in a menu tree and are graphically displayed at an interface of the medical system (*displaying available voice commands that are recognizable for a current context in a menu sequence, Col. 7, Lines 16-53; and Figs. 6-8*).

With respect to **Claim 3**, Brant further discloses:

The speech recognition control system is configured for "command and control" (*Col. 4, Lines 15-33*) and the available voice commands are automatically displayed (*automatic computer-generated pop-up menus of available voice commands, Col. 7, Lines 16-53; and Figs. 6-8*).

With respect to **Claims 4-5**, Brant further discloses generating an audio feedback in response to a received command (*Col. 4, Lines 62-65*).

With respect to **Claim 6**, Brant further discloses:

Determining and graphically displaying further available commands at the interface of the medical system (*generating further pop-up menus in response to received voice commands, Col. 7, Lines 16-53*). Greenberg also discloses displaying a selection of available voice command in an ultrasound archiving system (*Fig. 7*).

With respect to **Claim 8**, Brant discloses the method/system for medical device control as applied to claim 1. Although Brant discloses the benefit of controlling medical imaging systems (*Col. 10, Lines 42-46*), Brant does not explicitly disclose the types of medical imaging systems capable of being controlled, specifically a radiological dictation station. Greenberg, however, teaches a speech-controlled system that allows a user to dictate a spoken report pertaining to an ultrasound image for transcription (*Col. 5, Line 35- Col. 6, Line 65; and Col. 8, Lines 48-67*).

Brant and Greenberg are analogous art because they are from a similar field of endeavor in speech-controlled medical systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Brant with the concept of using speech commands to control an ultrasound dictation and review system as taught by Greenberg in order to provide a more efficient and user-friendly interface to an ultrasound imaging system (*Greenberg, Col. 2, Lines 28-43*).

With respect to **Claim 9**, Brant further discloses:

The recognizable commands are displayed in a popup box of contextual voice cues (*popup menu, Col. 7, Lines 16-53*). Greenberg also discloses displaying a selection of available voice command in a ultrasound archiving system (*Fig. 7*).

Claim 10 contains subject matter similar to Claim 2, and thus, is rejected for the same reasons.

With respect to **Claim 11**, Brant further discloses:

The recognizable voice commands are a subset of the total configured voice commands of the voice control system of the medical system (*display listing of available valid commands that do not include all system speech commands and ignoring a non-valid command outside of the available command subset, Col. 6, Line 58- Col. 7, Line 15*).

Claim 12 contains subject matter similar to Claim 3, and thus, is rejected for the same reasons.

Claim 13 contains subject matter similar to Claim 4, and thus, is rejected for the same reasons.

With respect to **Claim 14**, Brant further discloses:

The user acknowledging indication of the one or more voice commands initiates execution of the one or more voice commands to control the medical system (*user confirmation of a voice command, Col. 8, Lines 3-21*).

With respect to **Claim 16**, Brant discloses:

Navigating through a menu tree of a voice recognition control system of a medical system (*user navigation through a sequence of menus, Col. 6, Line 43- Col. 7, Line 53*);

Reviewing available voice commands that are graphically displayed (*user viewing of displayed available voice commands, Col. 6, Line 58- Col. 7, Line 53*); and

Speaking one or more voice commands that correspond to one or more of the available voice commands (*user speaking of displayed available voice commands, Col. 6, Line 58- Col. 7, Line 53*).

Although Brant discloses the benefit of controlling medical imaging systems (*Col. 10, Lines 42-46*), Brant does not explicitly disclose the types of medical imaging systems capable of being controlled, specifically a picture archival communication system or PACS. Greenberg, however, recites a speech-controlled system for storing medical ultrasound images and reports for access on/between multiple image review stations via a network (*Col. 4, Lines 61-66; Col. 5, Line 35- Col. 6, Line 65; and Col. 8, Lines 23-67*).

Brant and Greenberg are analogous art because they are from a similar field of endeavor in speech-controlled medical systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Brant with the concept of using speech commands to control an ultrasound imaging system as taught by Greenberg in order

to provide a more efficient and user-friendly interface to an ultrasound imaging system

(Greenberg, Col. 2, Lines 28-43).

Claim 17 contains subject matter similar to Claim 11-12, and thus, is rejected for the same reasons.

Claim 18 contains subject matter similar to Claims 3 and 9, and thus, is rejected for the same reasons.

Claim 19 contains subject matter similar to Claims 4-5, and thus, is rejected for the same reasons.

Claim 20 contains subject matter similar to Claim 13, and thus, is rejected for the same reasons.

With respect to **Claim 21**, Brant further discloses:

Further navigating through the menu tree *(subsequent navigation through a sequence of menus, Col. 7, Lines 16-53).*

With respect to **Claim 23**, Brant discloses:

A control system configured to receive, recognize and implement received voice commands to control a medical system *(speech recognition processor, Col. 6, Line 58- Col. 7, Line 15);*

A control interface that graphically displays available voice commands that are recognizable at a particular point in a control scheme of the control system *(computer display, Col. 6, Line 58- Col. 7, Line 53; and Figs. 6-8);* and

Wherein the control interface is configured to indicate recognition and receipt of a user voice command that corresponds to the available voice commands (*displayed confirmation, Col. 7, Line 54- Col. 8, Line 21*).

Although Brant discloses the benefit of controlling medical imaging systems (*Col. 10, Lines 42-46*), Brant does not explicitly disclose the types of medical imaging systems capable of being controlled, specifically a picture archival communication system or PACS. Greenberg, however, recites a speech-controlled system for storing medical ultrasound images and reports for access on/between multiple image review stations via a network (*Col. 4, Lines 61-66; Col. 5, Line 35- Col. 6, Line 65; and Col. 8, Lines 23-67*).

Brant and Greenberg are analogous art because they are from a similar field of endeavor in speech-controlled medical systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Brant with the concept of using speech commands to control an ultrasound imaging system as taught by Greenberg in order to provide a more efficient and user-friendly interface to an ultrasound imaging system (*Greenberg, Col. 2, Lines 28-43*).

With respect to **Claim 24**, Brant further discloses:

The particular point is a present point in the control scheme (*voice commands that are valid for a particular medical system context, Col. 6, Line 43- Col. 7, Line 53; and Col. 10, Line 56- Col. 11, Line 6*).

Claims 25-26 contain subject matter similar to Claim 3, and thus, are rejected for the same reasons.

With respect to **Claim 29**, Greenberg further discloses:

The available voice commands are displayed on a PACS workstation monitor (*Figs. 5-7, Col. 6, Lines 31-49*).

With respect to **Claim 30**, Brant discloses:

A control system configured to recognize and implement received voice commands to control a medical system (*speech recognition processor, Col. 6, Line 58- Col. 7, Line 15*); and

A graphical user interface that displays recognizable voice commands that correspond to a real-time position within a menu tree of the control system (*pop-up menu on a display interface that lists available voice commands for a current menu context, Col. 6, Line 58- Col. 7, Line 53; and Figs. 6-8*).

Although Brant discloses the benefit of controlling medical imaging systems (*Col. 10, Lines 42-46*), Brant does not explicitly disclose the types of medical imaging systems capable of being controlled, specifically a radiological dictation station. Greenberg, however, teaches a speech-controlled system that allows a user to dictate a spoken report pertaining to an ultrasound image for transcription (*Col. 5, Line 35- Col. 6, Line 65; and Col. 8, Lines 48-67*).

Brant and Greenberg are analogous art because they are from a similar field of endeavor in speech-controlled medical systems. Thus, it would have been obvious to a person of ordinary skill in the art, at the time of invention, to modify the teachings of Brant with the concept of using speech commands to control an ultrasound dictation and review system as taught by Greenberg in order to provide a more efficient and user-friendly interface to an ultrasound imaging system (*Greenberg, Col. 2, Lines 28-43*).

Claim 31 contains subject matter similar to Claim 4, and thus, is rejected for the same reasons.

Claim 32 contains subject matter similar to Claim 13, and thus, is rejected for the same reasons.

With respect to **Claim 36**, Brant in view of Greenberg discloses the method for speech command control of a PACS system, as applied to Claim 1, which can be implemented as a computer program stored in a computer-readable memory (*Brant, Col. 6, Lines 21-32*).

With respect to **Claim 37**, Brant in view of Greenberg discloses the method for speech command control of a ultrasound annotation system, as applied to Claims 8 and 33, which can be implemented as a computer program stored in a computer-readable memory (*Brant, Col. 6, Lines 21-32*).

Conclusion

13. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

14. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

Lamer et al (U.S. Patent: 6,766,297)- discloses speech control of a PACS system.

Vining et al (U.S. Patents: 6,785,410 and 6,819,785)- discloses a PACS and medical image reporting system utilizing a speech recognizer for system control (see '410- Col. 8, Line 53- Col. 9, Line 20; Col. 17, Lines 15-32; Col. 11, Lines 12-17; and Col. 15, Lines 43-55).

Reiner et al ("*The Cutting Edge: Strategies to Enhance Radiologist Workflow in a Filmless/Paperless Imaging Department*," 2002)- discloses a voice-enabled PACS system.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James S. Wozniak whose telephone number is (571) 272-7632. The examiner can normally be reached on M-Th, 7:30-5:00, F, 7:30-4, Off Alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached at (571) 272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

James S. Wozniak
1/4/2008


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